



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,114	08/24/2004	Christopher S. Jochumson	22207-010120	5113

51111 7590 12/04/2006

AKA CHAN LLP
900 LAFAYETTE STREET
SUITE 710
SANTA CLARA, CA 95050

EXAMINER

LERNER, MARTIN

ART UNIT PAPER NUMBER

2626

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,114	JOCHUMSON, CHRISTOPHER S.	
	Examiner	Art Unit	
	Martin Lerner	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 3, 5 to 6, and 8 to 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 to 3, 5 to 6, and 8 to 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 to 3, 5 to 6, and 9 to 21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 to 26 of U.S. Patent No. 6,865,536 in view of *Meisel et al.*

Although the conflicting claims are not identical, they are not patentably distinct from each other because the current claims of the application and the prior claims of the patent set forth the same subject matter of two or more clients storing audio speech in one or more buffers and a server comprising the capability to receive packets from each of the at least two clients. The only significant feature omitted by the claims of the parent patent is storing audio speech in buffers in a raw uncompressed audio format, as the claims of the parent patent do not expressly say that buffers store raw

Art Unit: 2626

uncompressed speech. However, *Meisel et al.* teaches preprocessing for speech recognition, where a general approach is disclosed of a means for buffering raw analog or digitized speech data for analysis by collecting and storing the raw data. Optimal parameters can then be extracted by analysis. (Column 5, Lines 6 to 12) It would have been obvious to one having ordinary skill in the art to modify the claims of the parent patent to include a feature of storing raw uncompressed audio speech in buffers as taught by *Meisel et al.* for a purpose of providing for analysis and collection of speech data for speech recognition to obtain optimal parameters during preprocessing.

A restriction requirement was made in the parent application, Application Serial No. 10/199,395, but the current claims of the application do not maintain the line of patentable distinctiveness. The current claims merely represent claims elected in the parent application, Application Serial No. 10/199,395.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 to 3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*

Concerning independent claim 1, *Barclay et al.* discloses a speech recognition system, comprising:

“two or more clients, each client comprising the capability to receive audio speech from a user, [store the audio speech in one or more buffers in a raw uncompressed audio format], each buffer comprising a portion of the received audio speech, encode a buffer of the received audio speech before all of the audio speech is received, package the encoded buffer to receive audio speech into one or more packets to be transmitted over the internet before all of the audio speech is received, and transmit a packet of encoded audio speech over the internet before all of the audio speech is received” – a connection between the client and the server can be any communication channel including the Internet; a client includes a microphone 10 for accepting audio input (“capability to receive audio speech from a user”) (column 4, line 62 to column 5, line 11: Figure 1); quantized feature data is delivered to dispatcher 26 where it may be temporarily buffered (column 5, lines 36 to 64); front-end 12 is a program for collecting the digitized speech, extracting a set of features, and quantizing those features (“encode a buffer of the received audio speech”) (column 5, lines 4 to 11); such buffering does not detract from the real-time aspect since the buffering is to accommodate timing delays and synchronization that may be needed; the front end streams the quantized data to the dispatcher; “stream” is defined to send substantially continuously the data in real-time (“before all of the audio speech is received”) (column 5, lines 48 to 55; column 7, lines 13 to 20); a client sends quantized speech data as message packets (“package the encoded buffer of received audio speech into one or more packets”) (column 7, lines 48 to 59); the packets can be forwarded by the client dispatcher to the server (“transmit a packet of encoded audio speech”) (column 7, lines

48 to 59); implicitly, a client/server architecture includes a plurality of clients (“two or more clients”) serviced by a server;

“a server, the server comprising the capability to receive packets of encoded audio speech from at least two clients, decode each of the packets of audio speech and store the resultant raw speech into one or more buffers for the respective client, and evaluate the resultant raw speech received from each of the at least two clients” – server side 4 includes dispatcher 18 that physically receives the quantized features (“receive packets of encoded audio speech”) (column 5, lines 21 to 35: Figure 1); server receives quantized speech data as message packets (“to receive packets of encoded audio speech”) (column 7, lines 48 to 59); server dispatcher accepts and buffers messages (digitized quantized features) 60 before the recognizer is ready to receive and process the messages (“decode each of the packets of audio speech and store resultant raw speech into one or more buffers for the respective client”) (column 7, lines 26 to 40); speech recognizer/decoder 20 recognizes words from the quantized speech features (“evaluate the resultant raw speech received”) (column 5, lines 21 to 35); implicitly, a client/server architecture enables a server to simultaneously service and buffer speech from a plurality of clients (“from each of the at least two clients simultaneously”).

Concerning independent claim 1, the only element omitted by *Barclay et al.* is that clients “store audio speech in one or more buffers in a raw uncompressed audio format”. *Barclay et al.* discloses that a client buffers digitized speech parameters before it is sent, but omits buffering analog speech as it is received. However, it is well known

to buffer speech both upon reception and before transmission to facilitate processing.

Meisel et al. teaches preprocessing for speech recognition, where a general approach is disclosed of a means for buffering raw analog or digitized speech data for analysis by collecting and storing the raw data. Optimal parameters can then be extracted by analysis. (Column 5, Lines 6 to 12) Thus, *Meisel et al.* suggests storing raw analog speech upon reception. It would have been obvious to one having ordinary skill in the art to include a feature of storing raw uncompressed audio speech in buffers as taught by *Meisel et al.* in a client/server speech processor/recognizer of *Barclay et al.* for a purpose of providing for analysis and collection of speech data for speech recognition to obtain optimal parameters during preprocessing.

Concerning claims 2 and 3, *Barclay et al.* discloses that a transcription or text is determined by the speech recognizer ("a result of the server's evaluation of the resultant raw speech received from the client"), the transcription is returned to the dispatcher, and the dispatcher returns the text to the client ("transmit a response to a client"); alternatively, the application program receives and understands the request from the client and performs the desired function (column 6, lines 5 to 25); a client has a browser 78 for displaying HTML (column 8, lines 36 to 47: Figure 4), which implicitly involves "a display screen".

Concerning claim 22, *Barclay et al.* discloses a client/server speech processor/recognizer, where a client transmits speech to a server, and a server evaluates the speech from the client; additionally, communication of control information

between client and server allows a variety of speech applications to be performed over the Internet, including filling in forms for an airline reservation/ticketing application (column 8, line 65 to column 9, line 15); a client may specify what grammar the speech processor should use to recognize the current speech input, and the client program can use keyword-value pairs to determine what action a server application program should perform, e.g. to display transcribed speech or to fill in a form displayed to the user (column 8, lines 22 to 36); thus, *Barclay et al.* permits a client to select an objective, e.g. transcribing speech or filling in forms for airline reservation/ticketing.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.* as applied to claim 1 above, and further in view of *Moshfeghi et al.*

Concerning claim 5, *Barclay et al.* discloses a server may provide web pages in HTML (column 8, lines 36 to 47), but does not expressly disclose two or more stored text formats, where the server selects a stored text format to a client as a result of the server's evaluation of the speech data. However, *Moshfeghi et al.* teaches an interactive voice response (IVR) system in a client/server architecture, where a server transmits Hypertext Markup Language (HTML) pages in accordance with personalization information stored in a user specific data store. The inclusion of such capability information allows the server to limit the use of or number of pixels in graphical objects in the HTML pages when the display is low resolution (or text only), or the bandwidth is limited so as produce unacceptably long download times. The HTML

page format is determined at user logon when the user speaks his ID and password (“as a result of the server’s evaluation of the resultant raw speech received from the client”). (Column 4, Lines 37 to 65: Figure 1) It would have been obvious to one having ordinary skill in the art for a server to select a stored text format for a client as suggested by *Moshfeghi et al.* in the browser of *Barclay et al.* for the purpose of accommodating low resolution displays and low bandwidth network connections.

Concerning claim 6, *Barclay et al.* discloses client and server exchange information as message packets (column 7, lines 48 to 59); the transfer of information may be organized in conformance with the TCP/IP protocols (column 5, lines 16 to 20); implicitly, an internet operating in accordance with a TCP/IP protocol also partitions text into message packets (“the capability to partition a stored text format file into one or more packets”) (column 7, lines 48 to 59).

Claims 8 to 13 and 18 to 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *Osborne et al.*

Concerning independent claims 9 and 11, the only elements omitted by *Barclay et al.* are buffers “organized as a linked list” and clients to “write the stored audio speech from a first buffer in a first set of buffers to a second buffer in a second set of one or more buffers”, where the speech is then packaged and transmitted over the internet from the second buffer. However, *Osborne et al.* teaches a network interface, where it is stated that linked lists of buffers are typically used for transmitting from a transmit side

to a receive side. (Column 3, Lines 59 to 65) In one embodiment, a receive side includes a free buffer ring queue 56 ("a first set of one or more buffers") and buffers 64 and 66 ("a second buffer in a second set of one or more buffers"), where frame data received from a network interface is read from free buffer ring queue 56 to either buffer 64 or buffer 66. (Column 10, Lines 20 to 44: Figure 1B) Buffers are organized as linked lists. (Column 18, Line 58 to Column 19, Line 14: Figure 8) An objective is to ensure low overhead and prevent blocking of transmission of frames for other connections. (Column 3, Lines 10 to 58) It would have been obvious to one having ordinary skill in the art to organize buffers as a linked list and write from first to second buffers as taught by *Osborne et al.* in the browser of *Barclay et al.* for the purpose of ensuring low overhead and preventing blocking of transmission frames from other connections.

Concerning claims 8, 18, and 19, *Osborne et al.* teaches a network interface, where it is stated that linked lists of buffers are typically used for transmitting from a transmit side to a receive side (column 3, lines 59 to 65); buffers are organized as linked lists (column 18, line 58 to column 19, line 14: Figure 8).

Concerning claims 10 and 21, *Barclay et al.* discloses digitized speech is encoded as cepstra (column 5, lines 2 to 10), which is a compressed format for speech.

Concerning claims 12 and 13, *Barclay et al.* discloses that a transcription or text is determined by the speech recognizer ("a result of the server's evaluation of the resultant raw speech received from the client"), the transcription is returned to the dispatcher, and the dispatcher returns the text to the client ("transmit a response to a client"); alternatively, the application program receives and understands the request

from the client and performs the desired function (column 6, lines 5 to 25); a client has a browser 78 for displaying HTML (column 8, lines 36 to 47: Figure 4), which implicitly involves "a display screen".

Concerning claim 20, *Osborne et al.* teaches a receive side includes a free buffer ring queue 56 ("a first set of one or more buffers") and buffers 64 and 66 ("a second buffer in a second set of one or more buffers"), where frame data received from a network interface is read from free buffer ring queue 56 to either buffer 64 or buffer 66 (column 10, lines 20 to 44: Figure 1B); implicitly, there are "a predefined number" of second buffers, *i.e.* there are two buffers 64 and 66.

Claims 14 to 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *Osborne et al.* and *Moshfeghi et al.*

Concerning claims 14 and 17, *Barclay et al.* discloses a speech-enabled browser for displaying data via a graphical user interface (GUI), where the GUI may include a LISTEN button (column 8, lines 48 to 64), but does not expressly disclose a text-to-speech engine for converting a text format response to audio data, which is played through a speaker. However, text-to-speech engines are generally well known in interactive voice response (IVR) systems to provide two-way audio interaction without requiring a display screen. *Moshfeghi et al.* teaches an interactive voice response (IVR) system in a client/server architecture, where a client provides a text-to-speech synthesizer incorporated into a browser/Java® applet for audible messages to avoid

visual distraction to the user and to minimize storage requirements. (Column 1, Lines 39 to 45; Column 3, Lines 37 to 51; Column 4, Lines 25 to 36: Figure 1) It would have been obvious to one having ordinary skill in the art to incorporate a text-to-speech synthesizer into the browser of *Barclay et al.* as suggested by *Moshfeghi et al.* for the purpose of avoiding visual distraction to the user.

Concerning claim 15, *Barclay et al.* discloses a server may provide web pages in HTML (column 8, lines 36 to 47), but does not expressly disclose two or more stored text formats, where the server selects a stored text format to a client as a result of the server's evaluation of the speech data. However, *Moshfeghi et al.* teaches an interactive voice response (IVR) system in a client/server architecture, where a server transmits Hypertext Markup Language (HTML) pages in accordance with personalization information stored in user specific data store. The inclusion of such capability information allows the server to limit the use of or number of pixels in graphical objects in the HTML pages when the display is low resolution (or text only), or the bandwidth is limited so as produce unacceptably long download times. The HTML page format is determined at user logon when the user speaks his ID and password ("as a result of the server's evaluation of the resultant raw speech received from the client"). (Column 4, Lines 37 to 65: Figure 1) It would have been obvious to one having ordinary skill in the art for a server to select a stored text format for a client as suggested by *Moshfeghi et al.* in the browser of *Barclay et al.* for the purpose of accommodating low resolution displays and low bandwidth network connections.

Concerning claim 16, *Barclay et al.* discloses client and server exchange information as message packets (column 7, lines 48 to 59); the transfer of information may be organized in conformance with the TCP/IP protocols (column 5, lines 16 to 20); implicitly, an internet operating in accordance with a TCP/IP protocol also partitions text into message packets ("the capability to partition a stored text format file into one or more packets") (column 7, lines 48 to 59).

Claims 23 and 25 to 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.* as applied to claims 1 and 22 above, and further in view of *Neumeyer et al.*

Concerning claim 23, *Barclay et al.* discloses a client/server speech processor/recognizer, where a client transmits speech to a server, and a server evaluates the speech from the client for user objectives of displaying transcribed speech or filling in a form for airline reservation/ticketing, but omits a user objective of pronunciation accuracy. However, *Neumeyer et al.* teaches a method and apparatus for automatic grading of pronunciation for language instruction based on speech recognition in a client-server language instruction environment. (Abstract) An objective is to provide for automatic assessment of pronunciation quality capable of grading even arbitrary utterances made up of word sequences for which there is no training data. (Column 2, Lines 15 to 38) It would have been obvious to one having ordinary skill in the art to utilize speech recognition for a user objective of pronunciation accuracy as

taught by *Neumeyer et al.* in a client/server speech processor/recognizer of *Barclay et al.* for a purpose of automatically assessing pronunciation quality of arbitrary utterances.

Concerning claims 25 to 27, *Neumeyer et al.* teaches that a server controls a lesson by dynamically sending control information that contains or specifies individual audio prompts, such as scripts and questions, by downloading control information including software for individual lessons. (Column 17, Lines 15 to 47: Figure 8) The downloaded control information for audio prompts involves transmitting a file to a user, and presenting the file in an audio format to the user, before the user provides verbal utterances to questions at the client for evaluation of pronunciation at the server.

Concerning claim 28, *Neumeyer et al.* provides for further interactions between the client and the server as additional audio prompts ("a second file") are downloaded from the server, provided by a client to a student ("presenting the second file to the user"), and a student responds to questions ("the client receives audio speech from the user") for pronunciation evaluation at a server. (Column 17, Lines 15 to 47: Figure 8)

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.* as applied to claims 1 and 22 above, and further in view of *August et al.*

Barclay et al. discloses a client/server speech processor/recognizer, where a client transmits speech to a server, and a server evaluates the speech from the client for user objectives of displaying transcribed speech or filling in a form for airline reservation/ticketing, but omits a user objective of teaching grammar. However, it is

Art Unit: 2626

known to utilize speech recognition for a variety of instructional and teaching objectives. Specifically, *August et al.* suggests a method for interactive language instruction for a client-server architecture [0050], where a student or teacher can arrange for customized combinations of functions to help a specific student learning issue, including pronunciation and grammar [0094]. At least one lesson involves teaching or reinforcing grammar skills. [0103] An objective is to have available an interactive language instruction program that provides advantageous features where functions may be combined to create rich applications for learning. [0094] It would have been obvious to one having ordinary skill in the art to apply a client/server speech processor/recognizer of *Barclay et al.* to a user objective of teaching grammar as suggested by *August et al.* for a purpose of combining teaching functions to create a rich environment for learning.

Response to Arguments

Applicant's arguments filed 13 October 2006 have been fully considered but they are not persuasive.

Firstly, Applicant argues that there is no motivation to combine *Barclay et al.* and *Meisel et al.*

However, there is an express motivation set forth by *Meisel et al.* The objective is to buffer raw analog speech for analysis during preprocessing so that optimal parameters can be extracted. (Column 5, Lines 6 to 12) Thus, *Meisel et al.* is saying that buffering of raw speech is advantageous to give a processor time to analyze the speech and extract parameters before any further processing for speech recognition.

Secondly, Applicant argues that there is no reasonable expectation for success and that the combination falls short of the recited invention.

Here, it is maintained that Applicant is improperly arguing the specifics of each reference individually without addressing the basis of the combination. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant is simply pointing out features of *Barclay et al.* and *Meisel et al.*, individually, and arguing that the features cannot be combined because of these differences. However, *Meisel et al.* is merely cited for an overall concept that it is well known to buffer raw speech for preprocessing. Thus, Applicant's arguments are not persuasive.

Thirdly, Applicant argues that the combination of *Barclay et al.* and *Meisel et al.* fails to store the speech itself in raw form. Applicant says that *Meisel et al.* stores only enrollment data, not speech.

It is maintained that buffering raw speech is taught by *Meisel et al.*, and buffering of raw speech is precisely equivalent to storing speech in raw form. Admittedly, *Barclay et al.* does not disclose storing speech in raw form. *Meisel et al.* may buffer enrollment data, but any enrollment data is in the form of speech. The enrollment data is speech for training a speech recognition system. Thus, *Meisel et al.* teaches buffering raw speech.

Fourthly, Applicant argues that it is improper to say that receiving speech from a human is data communication.

However, it is maintained that the distinction is immaterial to the rejection. *Meisel et al.* teaches buffering speech from a human speaker, so Applicant's objections should be moot.

Fifthly, Applicant argues that the prior art does not disclose encoding of the received speech. Applicant notes that *Barclay et al.* extracts and quantizes cepstral features for transmission through a network, but says that does not qualify as encoding. This argument is traversed.

Quantized cepstral features are a form of encoded speech. An encoding is produced because quantized cepstral features are a more compact representation of raw speech, but retain all of the desirable features to enable speech recognition. Quantized cepstral features are both an encoded and compressed form of speech. Admittedly, encoding of speech for cellular communications involves a different encoding format than cepstral features for speech recognition, but there are many ways of encoding a source.

Therefore, the rejections of claims 1 to 3, 5 to 6, and 9 to 21 on the ground of nonstatutory obviousness-type double patenting; of claims 1 to 3 and 22 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*; of claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *Moshfeghi et al.*; of claims 8 to 13 and 18 to 21 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *Osborne et al.*; of claims 14 to 17 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of

Art Unit: 2626

Osborne et al. and *Moshfeghi et al.*; of claims 23 and 25 to 28 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *Neumeyer et al.*; and of claim 24 under 35 U.S.C. 103(a) as being unpatentable over *Barclay et al.* in view of *Meisel et al.*, and further in view of *August et al.*, are proper.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

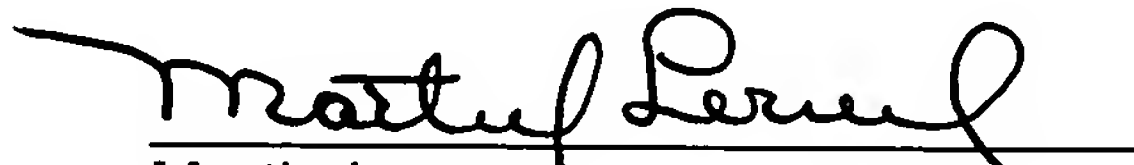
Adams, Jr. et al. and Shpiro et al. disclose related systems and methods for teaching and language instruction involving speech recognition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (571) 272-7608. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ML
11/28/06


Martin Lerner
Examiner
Group Art Unit 2626